

AMENDMENT under 37 C.F.R. § 1.111
U.S. Appln. No. 10/017,047

REMARKS

Claims 1-27 are pending in the application. Claims 1-27 stand rejected. Reconsideration and allowance of all pending claims are respectfully requested in view of the following remarks.

OBJECTIONS.

Claims 6 and 25-27 are objected to as including informalities which require correction. By this amendment, Applicant amends the claims as suggested by the Examiner. In view thereof, reconsideration is respectfully requested.

CLAIM REJECTIONS.

35 U.S.C. § 102

Claims 1-2, 6-7, 10, 15-16, 18, 22-25 and 27 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. 6,292,822 to Hardwick. Applicant respectfully traverses this rejection for the following reasons.

The Examiner is respectfully reminded that “[a] claim is anticipated only if each and every element as set forth in the claims is found, either expressly or inherently described in a single prior art reference.” *Verdegall Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987).

Hardwick discloses a system and method for dynamic load balancing among processors in a parallel computer. (Col. 4, ll. 24-26). In one implementation, Hardwick discloses that a processor sends a function call to an idle processor when the computational cost of the function call exceeds a threshold. (Col. 4, ll. 60-62). One of the processors in a group executing parallel programs acts as a manager and dynamically manages a handshaking process between another

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processor requesting help and an idle processor available to assist the requesting processor. (Col. 4, ll. 63-67).

By way of contrast, for example, Applicant's claim 1 recites:

1. An apparatus comprising:
a first processor to execute a first set of instructions;
a second processor to execute a second set of instructions;
a first monitor adapted to determine available performance capability of the first processor while executing the first set of instructions; and
a second monitor communicatively coupled to the first monitor and adapted to determine available performance capability of the second processor while executing the second set of instructions, wherein the apparatus is adapted to execute a third set of instructions on the first processor when the available performance capability of the second processor is less than an acceptable performance level to execute the third set of instructions.

Applicant respectfully submits that Hardwick fails to teach or suggest at least the claimed *first monitor* or *second monitor* that are *adapted to determine available performance capability* of respective *first and second processors*. The Office Action alleges that monitoring is disclosed at col. 4, ll. 24-40 where Hardwick states “[t]he dynamic load balancing method distributes processing workload by evaluating the computational cost of a function call at runtime and determining whether or not to ship the cal to another processor.”

However, Applicant respectfully submits this passage of Hardwick does not disclose any monitors whatsoever, and certainly does not disclose or suggest a *second monitor communicatively coupled to the first monitor*. Additionally, as recited in claim 1, the first processor is configured to execute a first and third set of instructions. In contrast, it appears that Hardwick discloses a system where an overloaded processor merely ships arguments of a call to

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an idle processor without consideration of the performance capability of the idle processor *while executing the first set of instructions.*

Further, with respect to independent claims 15 and 23, the Office Action cites Hardwick col. 6 [sic 36] ll. 14-21 as disclosing *polling a first processor to determine if the first processor has sufficient capacity to execute a first set of instruction when a second processor does not have sufficient capacity to execute the first set of instructions.* In point of fact, this passage of Hardwick discloses the managing processor checks a list of idle processors to see if any exist. Hardwick discloses that idle processors send messages to the manager notifying the manager that the processor is idle (Fig. 7, 708) and the manager adds the idle processor the idle processor list 720. (Col. 36, ll. 10-12 and 55-58). Accordingly, Hardwick actually teaches away from the recitations in claims 15 and 23 which recite *polling of a first processor.*

For at least the foregoing reasons, Applicant submits independent claims 1, 15 and 23 are not anticipated by Hardwick. Dependent claims 2, 6-7, 10, 16, 18, 22, 24-25 and 27 are also not anticipated for the same reasons by virtue of their respective dependencies on claims 1, 15 and 23. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the §102 rejections based on Hardwick. In the event the Examiner continues to believe Hardwick anticipates the pending claims, Applicant respectfully requests the Examiner to specifically identify the first and second monitors allegedly disclosed by Hardwick and how idle processors independently sending messages to the manager is considered “*polling.*”

35 U.S.C. § 103

Claims 3-5, 8-9, 11-14, 17, 19-21 and 26 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hardwick in view of U.S. 6,317,840 to Dean and/or U.S. 2003/0012143 to Chen in view of U.S. 6,496,823 to Blank, and/or in view of U.S 5,842,029 to Conary and/or in view of Blank. Applicant respectfully traverses these rejections for the following reasons.

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It is well established that a *prima facie* obviousness is only established when three basic criteria are met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991) (MPEP 2144).

The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680 (Fed. Cir. 1990).

In the case at hand, the Office Action admits Hardwick fails to specifically teach or suggest several additional limitations of the rejected claims. However, the Office Action attempts to reconstruct the pending claims by combining various passages from additional prior art references with those of Hardwick. Applicant notes that the Office Action has overlooked many limitations of the pending claims; for example claim 5 recites "*the first monitor is adapted to determine the available performance capacity based on an operational frequency of the first processor.*"

Notwithstanding, Applicant respectfully submits that since Hardwick fails to teach or suggest the features of Applicant's independent claims described above, and since the remaining cited references fail to make up for the notable deficiencies of Hardwick, Hardwick taken alone or in combination with any of the cited references, cannot render Applicant's claims obvious. Accordingly, since a *prima facie* case of obviousness has not been established for failure to teach or suggest all the features of the pending claims, Applicant does not address the properness of, or acquiesce to, combining the cited references or the theories of inherency relied on in the Office Action.

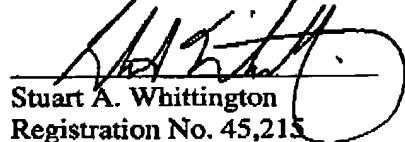
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For all the foregoing reasons, Applicant respectfully requests the Examiner to reconsider and withdraw all §103 rejections of record.

CONCLUSION.

In view of the foregoing, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below. Applicant hereby petitions for any extension of time which may be required to maintain the pendency of this case, and any required fee or deficiency thereof, except for the Issue Fee, is to be charged to **Deposit Account # 50-0221.**

Respectfully submitted,



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